



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,397	10/19/2001	Taddy Shao	FP-664	6814

7590 09/08/2004
Taddy Shao
No. 34, Lane 87, Fu I Street, Chi Tu
Keelung, 206
TAIWAN

EXAMINER

BOOKER, KELVIN E

ART UNIT PAPER NUMBER

2121

DATE MAILED: 09/08/2004

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Sc

Office Action Summary

Application No.

09/982,397

Applicant(s)

SHAO, TADDY

Examiner

Kelvin E Booker

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Office Action.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-5** are rejected under 35 U.S.C. 102(b) as being anticipated by Dykema et al., U.S. Patent No. 5,661,804 (hereafter Dykema).

As per claim 1, Dykema teaches of an intelligent transmitter receiver system comprising:

A. a CPU (Central Processing Unit) [e.g., micro-controller] adapted to control instructions for the actions of code-transmitting mode and copy-learning mode (see figure 6A, element 57; and column 4, line 64 through column 5, line 21: "To achieve these...for actuation thereof");

B. a data-entry keys [e.g., push button switches] input circuit adapted to input signal into said CPU (see elements 44-48 of figures 1-4);

C. a DC battery circuit adapted to provide the necessary working power supply (see figure 5, elements 56 and 60: "A power supply...a conventional manner");

D. a DC voltage rectifier circuit adapted to electrically connect a DC battery circuit and convert the output power of the DC battery circuit into the necessary working voltage (see figure 5, elements 56 and 60);

E. a memory adapted to store code data obtained by said CPU and the center frequency value of said digital-to-analog converter (see figure 6A; and column 13, lines 22-42: "As indicated in the test...central logic circuit 75");

F. an indicator lamp circuit [e.g., LED circuit] adapted to indicate current operation mode subject to the instruction of said CPU by maintaining indicator lamp means thereof constantly on when at the code-transmitting mode, or flashing said indicator lamp means when at the copy-learning mode (see figure 5, element 48; and column 7, lines 23-37: "Micro-controller 57 additionally...a signal T");

G. a digital-to-analog converter adapted to convert digital (parallel) signal into analog signal subject to the instruction of said CPU, so as to further drive a voltage-control type high-frequency transmitting circuit to change output oscillation frequency (see figure 6A, element 72);

H. a voltage-controlled type high frequency transmitting circuit adapted to transmit an oscillation frequency subject to the control of said CPU and said digital-to-analog converter (see figure 6A);

I. a bandwidth extension switching circuit adapted to extend the bandwidth of said voltage-controlled type high frequency transmitting circuit (see figure 6A and figure 7: trainable bandwidth extension circuit for a voltage-controlled frequency circuit);

J. a mixer circuit adapted to mix the wave from said internal high-frequency transmitting circuit with the wave from an external remote controller, enabling the signal to be outputted only when wave mixing achieved (see figure 6A and figure 7);

K. a signal amplifier adapted to amplify signal from said mixer circuit and signal from a full-channel receiving circuit into a digital serial signal receivable to said CPU (see figure 6A,

Art Unit: 2121

element 74; and column 68, line 66 through column 9, line 4: "RF circuit 58...varactor diode 71"); and

L. a full-channel signal receiving circuit adapted to receive external series signal and to output received series signal to said CPU for rapid center frequency correction (see figure 6A and figure 7).

As per claim 2, Dykema teaches of an intelligent transmitter receiver system wherein the CPU is adapted to drive said signal amplifier to store fetched serial signal in said memory (see column 13, lines 22-42: "As indicated in the test...central logic circuit 75").

As per claim 3, Dykema teaches of an intelligent transmitter receiver system wherein the CPU fetches serial wave from said full-channel signal receiving circuit during frequency correction said voltage-controlled type high (scanning), and then turns on frequency transmitting circuit to start wave mixing operation (see column 13, lines 22-55: "As indicated in the test...signal it may transmit").

As per claim 4, Dykema teaches of an intelligent transmitter receiver system further comprising adapted to switch data-entry keys of said data-entry keys input circuit between two systems so as to double the functions of data-entry keys of said data-entry keys input circuit (see column 6, line 44 through column 7, line 21: "As described above...cryptographic algorithm itself").

As per claim 5, Dykema teaches of an intelligent transmitter receiver system wherein said bandwidth extension switching circuit is comprised of at least one frequency switching diode (see column 14, lines 29-59; and column 7, line 61 through column 8, line 5).

Allowable Subject Matter

3. **Claim six** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

the cited prior art fails to explicitly teach of an intelligent transmitter receiver method of operations comprising a copy-learning mode consistent with the disclosed limitations of claims one and six, wherein the operational process of the learning mode comprise a method of generating and storing mean frequency values obtained as a result of mixing received remote serial signals with digital-to-analog oscillatory frequencies for optimizing frequency correction functionality and power consumption.

Conclusion

5. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

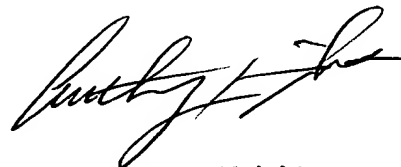
- A. Dykema et al., U.S. Patent No. 6,091,343;
- B. Blaker, U.S. Patent No. 6,703,941;
- C. Suman et al., U.S. Patent No. 5,903,226;
- D. Dykema, U.S. Patent No. 5,442,340;
- E. Zeinstra et al., U.S. Patent No. 5,479,155;
- F. Zeinstra et al., U.S. Patent No. 5,614,891;

G. Suman et al., U.S. Patent No. 5,793,300;
H. Dykema et al., U.S. Patent No. 5,854,593; and
I. Heitschel et al., U.S. Patent No. 4,988,992.

6. An inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Booker whose telephone number is (703) 308-4088. After October 15, 2004, Mr. Booker can be reached at (571) 272-3681. The examiner can normally be reached on Monday-Friday from 7:00 AM-5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight, can be reached on (703) 308-3179. After October 15, 2004, Mr. Knight can be reached at (571) 272-3683. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

An inquiry of a general nature or relating to the status of this application proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Anthony Knight
Supervisory Patent Examiner
Group 3600

K.E.B.

Art Unit 2121

August 30, 2004